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October 23, 1989

Via Federal Express

Mary A. Gade
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U.S. Environmental Protection Agency
Region 5
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OFFICE OF SUPERFUND
ASSOCIATE DIVISION DIRECTOR

Re: Docket No. VW 89-C-008,
Fields Brook Superfund Site

Dear Ms. Gade:

This letter, which is submitted on behalf of Cabot Corporation ("Cabot"), responds to your letter of October 1, 1989, threatening to bring an enforcement action pursuant to Section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 9606.

For the reasons stated below, the Environmental Protection Agency ("EPA") could not properly bring a Section 106 enforcement action against Cabot. First, the evidence of record does not support EPA's allegation that Cabot is subject to liability at this site. Cabot has not been linked to any of the contaminants of concern at the Fields Brook site. Any releases

PEPPER, HAMILTON & SCHEETZ

Mary A. Gade
October 23, 1989
Page 2

from Cabot's former plants therefore did not create the risk at this site and did not cause the proposed response action.

Second, neither Cabot nor any of the other "Upper Brook" companies has "willfully violated" EPA's Section 106 order. Cabot has repeatedly offered to participate in the work required by EPA's order, but its offers have been rejected both by EPA and by the six potentially responsible parties ("PRPs") that have agreed to perform this work. The agency has simply refused to allow the company to perform any part of the Section 106 work independently. At the same time, the six "cooperating" PRPs have insisted upon a grossly unfair cost allocation scheme as a condition of Cabot's joining in their remediation effort. This has made it impossible for Cabot to participate in this effort.

Third, there is no "imminent and substantial endangerment" at this site. EPA's risk assessment exaggerates the dangers at this site, and the agency itself has conceded that any risk stems entirely from long-term ingestion of sediment, long-term consumption of fish, and long-term exposure to surface water. EPA has identified no "imminent" hazard of any kind with respect to any PRP.

Fourth, the decision-making process at this site has been seriously flawed. In selecting its remedy, the agency has denied Cabot and many other PRPs any meaningful opportunity to be

PEPPER, HAMILTON & SCHEETZ

Mary A. Gade
October 23, 1989
Page 3

heard. The agency has failed to satisfy even the most basic due process requirements. In addition, EPA has never examined remedial options in a neutral manner, but has instead sought to justify a predetermined result. For these reasons, the agency should vacate its Section 106 order as to all respondents, reopen its Record of Decision, and solicit comment from all interested parties.

I. CABOT IS NOT SUBJECT TO LIABILITY AT THIS SITE

EPA's Section 106 order and your recent letter assume that Cabot is subject to liability at this site. Under CERCLA, however, liability may be imposed only if there is a release or threatened release of hazardous substances which causes the incurrence of response costs. 42 U.S.C. § 9607(a); New York v. Shore Realty Corp., 759 F.2d 1032, 1043 n.16 (2d Cir. 1985); Dedham Water Co. v. Cumberland Farms, Inc., 689 F. Supp. 1223, 1225 (D. Mass 1988).¹

1. Another flaw in EPA's Section 106 order stems from the fact that EPA has failed to identify the "hazardous substances" allegedly released by Cabot. Furthermore, EPA's order defines the entire watershed as a "Facility" under 42 U.S.C. § 9601(9). EPA then alleges that each of the respondents "is now, or has been, an 'owner or operator' at part of the Facility." 106 Order ¶ IV (3) (emphasis added). Since none of the respondents "owns" the surface water and sediment in Fields Brook and since the work covered in the EPA's order relates primarily to the surface water and sediment, the owner-operator theory is misdirected. Also, since the evidence of record does not indicate that hazardous substances have been "deposited" or "disposed of" throughout the watershed, EPA's order defines the "facility" in an overly broad and inappropriate way. See 42 U.S.C. § 9601(9).

PEPPER, HAMILTON & SCHEETZ

Mary A. Gade
October 23, 1989
Page 4

At the Fields Brook site, there is no evidence that releases from Cabot's former plants have played any role in triggering EPA's response action. In fact, the cleanup effort at this site is directed almost exclusively at reducing the risks attributed by EPA to a relatively small group of contaminants. The agency's Record of Decision ("ROD") states that, in sediment, the "primary chemicals contributing to the risk are 1,1,2,2-tetrachloroethane, tetrachloroethene, PCB[s], hexachlorobenzene, and hexachlorobutadiene." Record of Decision at 4; 106 Order at 9 ¶ 10.² There is no evidence linking Cabot to any of these contaminants.

Mary A. Gade
October 23, 1989
Page 5

Furthermore, even apart from the absence of evidence linking Cabot to any of the key contaminants, Cabot would not be an appropriate defendant in a Section 106 enforcement action. The only allegation against Cabot is that the company previously owned facilities in this area. As explained in United States v. Wade, 546 F. Supp. 785, 793-794 (E.D. Pa. 1982), appeal dismissed, 713 F.2d 49 (3d Cir. 1983), Congress did not intend to impose Section 106 liability on past owners or generators. Section 106 was meant to be used "in emergency situations where hazardous waste [is] currently being discharged or threatened to be discharged" and "where such discharge could be stopped by an injunction." Id. at 794. There is no "emergency situation" at this site, and enforcement of EPA's order would not have the effect of stopping any current "discharges" by Cabot.⁴

4. In addition, in its Section 106 order, EPA has wrongly attempted to invoke the principles of joint and several liability. Not only is the harm at this site divisible (by Brook segment and by contaminant), but as one court has stated:

Insofar as plaintiffs [United States and the State of California] may intend to ask the Court to compel certain actions on the part of all defendants . . . the Court concludes that such orders would have to state with specificity the steps to be taken and the party to take them. If steps were ordered taken jointly, the Court would have to prescribe the participation of each defendant In sum, the Court sees no role under section 106(a) of CERCLA for what plaintiffs describe as "joint and several liability to abate."

United States v. Stringfellow, 20 Env't Rep. Cas. (BNA) 1905, 1910 (C.D. Cal. 1984).

Mary A. Gade
October 23, 1989
Page 6

II. CABOT'S EFFORTS TO PARTICIPATE IN THE SECTION 106 WORK
HAVE BEEN BLOCKED BY THE SIX DOWNSTREAM PRPS AND BY EPA

Despite the absence of evidence against Cabot and despite the many flaws in EPA's order, Cabot and eight other upstream PRPs have offered to participate in the work specified in the agency's Section 106 order. EPA, however, has rejected these offers and refused to allow Cabot and other PRPs to perform the work relating to the upper segments of the Brook. The six "cooperating" PRPs have also rejected offers of assistance. These six PRPs -- all of whom are linked to hazardous substances of great concern at this site -- have insisted upon a grossly unfair cost allocation scheme as a condition of Cabot's joining in their remediation effort.⁵ Their conduct and EPA's acquiescence in that conduct have made it impossible for Cabot to assist in this effort.

In light of the actions taken by the agency and by the downstream PRP group, Cabot certainly cannot be accused of "willfully violat[ing]" EPA's order. 42 U.S.C. § 9606(b)(1). The company has made every effort to comply with the agency's order, but compliance has been impossible. For this reason alone, the federal government could not properly seek an award of

5. Their allocation scheme takes no account of the toxicity, mobility, or cost of remediating the various types of contamination found in specific segments of the Brook. It is therefore contrary to statutory requirements. See 42 U.S.C. §§ 9613(f), 9622(e)(3); United States v. Stringfellow, 661 F. Supp. 1053 (C.D. Cal. 1987).

PEPPER, HAMILTON & SCHEETZ

Mary A. Gade
October 23, 1989
Page 7

monetary penalties against Cabot. See generally H.R. Rep. No. 253, 99th Cong. 1st Sess., pt. 1 at 82 (1985) (sufficient cause encompasses "situations" in which "the equities require that no penalties" be assessed), reprinted in 1986 U.S. Code Cong. & Admin. News 2835, 2864.

In any event, EPA does not have authority to initiate a Section 106 enforcement action in these circumstances. Since the work required by EPA's order is now underway, the agency is not authorized to bring an action "to enforce" that order. 42 U.S.C. § 9606(b)(1).

III. THERE IS NO IMMINENT AND SUBSTANTIAL ENDANGERMENT AT
THIS SITE

Section 106 orders may be issued only when there is an "imminent and substantial endangerment to the public health or welfare or the environment." 42 U.S.C. § 9606(a); see generally United States v. Wade, 546 F. Supp. at 793-794; Outboard Marine Corp. v. Thomas, 773 F.2d 883, 890 (7th Cir. 1985), vacated and remanded on other grounds, 479 U.S. 1002 (1986). At this site, there is no imminent danger of any kind. As EPA officials have recognized, the risk assessment performed at this site was distorted. This had the effect of exaggerating the risks at this

Mary A. Gade
October 23, 1989
Page 8

site.⁶ In addition, even the agency's Record of Decision recognizes that any risks stem solely from long-term consumption of fish and long-term exposure to surface water and sediment. There is no evidence of any significant risk to public health or to the environment in the short-run.

Moreover, none of the work required by EPA's order is directed at any "imminent" hazard. EPA's order covers only design work and additional RI/FS work. Thus, by the nature of its own decision, the agency has effectively conceded that there is no "imminent and substantial" risk at this site.

IV. EPA HAS DENIED CABOT ANY OPPORTUNITY TO PARTICIPATE IN THE REMEDY SELECTION PROCESS AND EPA'S CHOSEN REMEDY IS NOT CONSISTENT WITH THE NCP OR SUPPORTED BY THE EVIDENCE OF RECORD

The agency's decision-making process at this site has been flawed from the start. Under the due process clause, PRPs

6. Internal EPA memoranda confirm that the risk assessment and the RI/FS at this site were based upon improper assumptions. One of the fundamental assumptions underlying the risk assessment -- relating to the quantity of fish from the Brook consumed by local residents -- was later criticized by one of EPA's own reviewers as being "unrealistic" and unsupported by the record. See Memorandum from S. Ostrodka, Chief, Technical Support Unit, EPA, To Allen Wojtas, Remedial Project Manager, EPA at 2 (July 31, 1986). See Appendix A *infra*. In addition, in some instances, the approach taken in the risk assessment is directly contrary to guidance issued by EPA headquarters. For example, in calculating risk levels for sediment ingestion, EPA regional personnel assumed that local residents would consume approximately 10 times more sediment than is appropriate under EPA guidance. See Interim Final Guidance for Soil Ingestion Rates, Memorandum from J. Winston Porter, EPA Assistant Administrator To Regional Administrators (January 27, 1989).

Mary A. Gade
October 23, 1989
Page 9

must be given notice and an opportunity to be heard before any final remedial decision is made.⁷ This opportunity must be provided "at a meaningful time, and in a meaningful manner."⁸

At the Fields Brook site, even these minimal due process requirements have not been satisfied. EPA, for example, did not even notify Cabot that the company was considered as a PRP until November 23, 1987. This notice was issued more than one year after issuance of the ROD and more than one year after the close of the comment period on the Feasibility Study. Then, when the agency later issued its Section 106 order, it purported to impose a six day time limit on the submission of comments. In view of Cabot's lack of opportunity to comment during the remedy selection process and the complexity of the legal and factual issues at this site, this time limit was completely unreasonable.

In addition to denying PRPs such as Cabot any opportunity to participate in the remedy selection process, EPA itself has never objectively assessed remedial alternatives, as

7. See Mathews v. Eldridge, 424 U.S. 319, 332-333 (1976); Ohio Bell Tel. Co. v. Public Utils. Comm'n, 301 U.S. 292, 300-304 (1937); NLRB v. Mackay Radio & Tel. Co., 304 U.S. 333, 349-51 (1938). PRPs such as Cabot are protected by the due process clause. See generally United States v. Hardage, 663 F. Supp. 1280, 1288-1290 (W.D. Okla. 1987); Industrial Park Development Co. v. EPA, 604 F. Supp. 1136, 1141 (E.D. Pa. 1985).

8. Armstrong v. Manzo, 380 U.S. 545, 552 (1965). The only meaningful time to be heard at a Superfund site is before a remedy has been selected. See also 42 U.S.C. § 9613(k)(2)(B), (C), (D).

Mary A. Gade
October 23, 1989
Page 10

required by the NCP. 40 C.F.R. § 300.68(g),(h),(i) (1988). Instead, the agency has structured its analysis to achieve a predetermined result, namely, a remedy that relies heavily on excavation and incineration. As EPA's own reviewers recognized, the RI/FS at this site was designed to "vindicate a fore-gone conclusion."⁹ This skewed RI/FS was then used as the foundation for the ROD and the Section 106 order. Indeed, throughout the process, EPA has adhered to its position that incineration is required, despite its tremendous costs. In light of the agency's apparent bias, however, its evaluation of the cost-effectiveness of this approach is highly suspect.¹⁰

Furthermore, EPA chose to rely on incineration based in large part on a misinterpretation of the PCB disposal regulations issued under the Toxic Substances Control Act ("TSCA"). EPA wrongly assumed that under these regulations, incineration was the only option available for sediment containing PCBs at concentrations of 50 parts per million or higher. In fact, the TSCA regulations provide that dredged

9. Memorandum from S. Ostrodka, Chief Technical Support Unit, EPA to Allen Wojtas, EPA Remedial Project Manager at 1 (July 31, 1986).

10. The NCP in effect during the period in question required the agency to adopt a cost-effective approach. See 40 C.F.R. § 300.68(j) (1984); 40 C.F.R. § 300.68(i)(1) (1988); 42 U.S.C. § 9605(a)(7); United States v. Outboard Marine Corp., 789 F.2d 497, 506 (7th Cir.), cert. denied, 479 U.S. 961 (1986). The existing record does not support EPA's finding that the remedy selected at Fields Brook is cost-effective.

PEPPER, HAMILTON & SCHEETZ

Mary A. Gade
October 23, 1989
Page 11

materials, such as sediment, may be incinerated, landfilled, or disposed of by any alternative method that is protective of human health and the environment.¹¹

Lastly, since the agency's Section 106 order is designed to implement a misguided remedial decision, that order is itself fatally flawed. Rather than seeking to enforce the Section 106 order, EPA should begin a reassessment of all its prior decisions at this site. As part of this reassessment, the agency should vacate its Section 106 order, reexamine possible cleanup methods, and solicit comment from all interested parties.

Sincerely yours,

Marc D. Machlin

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Attorneys for Cabot Corporation

cc: Michael Berman, Esq.
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11. See 40 C.F.R. § 761.60(a)(5); see also 40 C.F.R. § 761.60(a)(4). Even these requirements are not applicable to PCBs disposed of prior to February 17, 1978. See the note included in the beginning of 40 C.F.R. § 761.60 and Part 761 - Polychlorinated Biphenyls, 43 Fed. Reg. 7,150, 7,157 (1978).

EPA also failed to adequately assess the environmental and public health risks posed by incineration. Potential adverse effects on air quality were downplayed or disregarded.

Appendix A

A PRELIMINARY CRITIQUE OF THE RISK ASSESSMENT, THE REMEDY, AND THE DECISION-MAKING PROCESS AT THE FIELDS BROOK SUPERFUND SITE

On March 22, 1989, the Environmental Protection Agency ("EPA") issued a Section 106 order directing 19 companies, including the Cabot Corporation, to perform remedial design and RI/FS work at the Fields Brook Superfund site. It is apparent, however, that EPA's order is fatally flawed. One of the most significant errors stems from the fact that the agency's finding of "imminent and substantial endangerment" is based solely upon a distorted risk assessment. This risk assessment exaggerates the potential dangers at this site by adopting assumptions which are totally unrealistic.

As explained below, it is also apparent that the decision-making process at this site has been marred by a lack of objectivity. Instead of assessing remedial alternatives in a neutral, unbiased way, EPA has adopted a result-oriented approach. Even before the completion of the RI/FS, the agency decided upon a remedy that relies in large part on excavation and incineration of sediment. This remedy is extremely costly, and, in attempting to justify this preselected approach, EPA has misconstrued the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP") and the regulations governing the disposal of polychlorinated biphenyls ("PCBs") under the Toxic Substances Control Act ("TSCA").

For all of these reasons, EPA should vacate its Section 106 order, reassess the remedy adopted at this site, and solicit comment from all interested parties.¹

I. EPA'S FINDING OF "IMMINENT AND SUBSTANTIAL ENDANGERMENT" IS BASED UPON A FLAWED RISK ASSESSMENT

EPA is authorized to issue Section 106 orders only when there is or may be an "imminent and substantial endangerment" to public health or to the environment. 42 U.S.C. § 9606. At the Fields Brook site, EPA's allegation that an "imminent and substantial endangerment" exists is based solely upon the risk assessment that was previously prepared. That risk assessment is not supported by the evidence of record and is not consistent with EPA guidance or with the NCP.²

1. This is a preliminary critique of EPA's approach, not a comprehensive evaluation. Cabot has relied upon publicly available documents. Since Cabot has been denied access to other documents, including the proposed Work Plan for the Section 106 work, the company reserves the right to supplement or modify this document as additional information becomes available. Furthermore, nothing herein may be construed as a waiver of the right to raise any other legal or factual defense.

2. Clearly, "imminent and substantial endangerment" requires more than a release or threatened release or Congress would not have provided two standards in the statute, one in Section 104 and one in Section 106. CERCLA does not require cleanup to a zero risk level. National Oil and Hazardous Substance Pollution Contingency Plan, 53 Fed. Reg. 51,394, 51,441 (1988) ("Proposed NCP"). Rather, EPA uses health-based "applicable or relevant and appropriate requirements" ("ARARs") to set cleanup levels. If there are no ARARs or if ARARs are inadequate to protect public health at a site, a cleanup level is derived from a theoretical risk calculation. Id.

In virtually all of its regulatory programs, including response actions pursuant to Superfund, EPA accepts theoretical
(continued...)

A. The Risk Assessment For Sediment

The evidence currently available indicates that the agency has substantially overstated the risks attributable to sediment ingestion. Even if one accepts for the purposes of argument the basic methodology used in the risk assessment,³ the final results of that assessment must be rejected. That is because the exposure assumptions used in the assessment are arbitrary and capricious and often contrary to the existing data and/or EPA guidance on risk assessment.

For example, the highest theoretical risk cited in the Order is based on factually wrong or absurd assumptions, including, but not limited to the following:

2. (...continued)
residual risks in the range of one-in-ten thousand (10^{-4}) to one-in-ten million (10^{-7}). Solid Waste Disposal Facility Criteria, 53 Fed. Reg. 33,314, 33,352 (1988) (proposed rule). Accordingly, an "imminent and substantial endangerment" must be a risk that is significantly greater than 10^{-4} lifetime risk using reasonable worst-case assumptions. The evidence of record does not indicate that such a risk is present at this site.

3. Risk assessment methodology uses over 50 science policy assumptions. See Chemical Carcinogens; A Review of the Science and Its Associated Principles, February 1985, 50 Fed. Reg. 10,372, 10,375 (1985); National Research Council, Risk Assessment in the Federal Government: Managing The Process (1983) ("Risk Assessment Management"). As a result, these theoretical risk values are primarily a function of policy rather than science. The theoretical risks that result are designed to overpredict the actual risk. Risk Assessment Management at 36-37. According to EPA's guidance on risk assessment, the actual risk is some value between zero and the risk value calculated in the theoretical risk assessment. Guidelines for Carcinogen Risk Assessment, 51 Fed. Reg. 33,992, 33,998 (1986) (final guidelines).

- (1) that a person eats an average of 1.7 grams of sediment from the most contaminated portion of the stream for 70 years;⁴
- (2) that the concentration of chemicals in the sediment during this 70 years are the highest concentration observed;
- (3) the concentration of the chemicals in sediments do not decrease over 70 years, either as a result of being covered with cleaner sediment or from degradation of the chemicals in the sediment;
- (4) that 100 percent of the chemicals are absorbed after ingestion;
- (5) that the concentration of organic chemicals which were reported as "detected but less than the quantitation limit" were assumed to be present at a concentration equal to the quantitation limit, contrary to the actual measurements;
- (6) that maximum concentrations used in the risk assessment were the highest concentration at any depth, whether or not the sediment could conceivably be available for "eating;"
- (7) that the chemicals in the sediment are bioavailable;⁵ and
- (8) that the site has potential for unrestricted future residential and/or commercial and industrial use. (See Feasibility Study, Fields Brook Site, Sediment Operable Unit, Ashtabula, Ohio at 2-5 to 2-7, 2-11, Appendix A and Appendix B (July 3, 1986) ("FS")).

4. The average rate of ingestion is 0.0281 grams/kg/day and the weighted average lifetime weight is 59.9 kg. The assumption is that a child eats 10 grams of sediment every day when evaluating the potential impact of exposure to chemicals with noncarcinogenic effects.

5. EPA policy is that "there are many questions regarding the bioavailability of sediment-bound chemicals and their significance to the biosphere." Proposed Guidelines for Exposure-Related Measurements, 53 Fed. Reg. 48,830, 48,836-37 (1988) ("Proposed Exposure Guide").

It may be appropriate to err, if at all, on the side of protecting public health in determining risks by using assumptions that may overestimate actual exposure. However, it is quite another matter to use exposure assumptions that are known to be factually incorrect⁶ and contrary to EPA's own risk assessment guidelines. It is contrary to EPA policy to use only "worst-case" assumptions in a risk assessment. EPA, Superfund Public Health Evaluation Manual 38 (EPA/540/1-86/060, October 1986) ("Superfund Public Health Evaluation Manual"); Guidelines for Estimating Exposures, 51 Fed. Reg. 34,042, 34,053 (1986) (final) ("Exposure Guide"); Proposed Exposure Guide, 53 Fed. Reg. at 48,846 n.5.

The need to place reasonable limits on exposure assumptions is obvious. One can always conceive of an extreme or unrealistic exposure assumption that will result in high exposure and, therefore, high risks. An exposure assumption must be reasonably related to actual human experience, otherwise the assessment fails to fulfill its purpose.⁷ The assumption that people regularly eat sediment simply bears no relation to human

6. "Reliable, analytically determined values should be given precedent over estimated values..." Exposure Guide, 51 Fed. Reg. at 34,053.

7. "In most exposure assessments, adjusting all parameters to their limiting values would maximize exposure results in a scenario that may not have [a] realistic chance of happening in the real world.... For this reason, the concept of 'reasonable worst-case' scenarios is often used, where exposures are high but the combination of parameters thought to be one which probably occurs in the actual population." Proposed Exposure Guide, 53 Fed. Reg. at 48,846 n.5.

habits or experience.⁸ Indeed, under this assumption, every business and every household in the United States presents an "imminent and substantial endangerment" because someone can be assumed to ingest large quantities of common commercial or household substances used in businesses and homes, e.g., common cleaners, gasoline and lubricants. As a result, EPA policy states that "[i]t is not legitimate to use a worst-case scenario to prove that there in fact exists a concern in a real population. . . . It is critical that the results of a worst-case individual [exposure] scenario are not immediately applied to an entire population, since in almost all cases this will result in a substantial overestimate of a potential problem." Proposed Exposure Guide, 53 Fed. Reg. at 48,846.⁹

Furthermore, the quantity of sediment assumed to be ingested in the Order (1.7 grams per day for 70 years) is expressly contrary to EPA Superfund guidance. This guidance states that EPA risk assessments should assume that an adult ingests 0.1 grams per day and a child ingests 0.2 grams per day in those areas where soil ingestion is a "realistic worst-case" exposure assumption, i.e., residential areas. See Interim Final

8. There are rare disorders, such as pica, that result in a propensity to eat soil. Generally, EPA has not set regulatory levels to protect the most sensitive individual in a population. Memorandum from J. Winston Porter, Assistant Administrator to Regional Administrators, re: Interim Final Guidance for Soil Ingestion Rates at 2 (Jan. 27, 1989). In any event, it is likely that a child with pica would not eat sediment.

9. See also Exposure Guide, 51 Fed. Reg. at 34,053.

Guidance For Soil Ingestion Rates, Memorandum From J. Winston Porter, EPA Assistant Administrator to Regional Administrators (January 27, 1989); Standards for the Disposal of Sewage Sludge, 54 Fed. Reg. 5746, 5769 (1989) (proposed rule).

The guidance also notes, however, that there may be situations where, as with Fields Brook, the amount of soil ingested may be assumed to be less than in a residential setting, i.e., areas where adults and/or children are assumed to be less likely to be exposed. Obviously, the frequency that an adult or child wades in a stream such as Fields Brook, is certain to be less than the frequency that an adult works or a child plays in their backyard (the assumption used in EPA's guidance).

It is also contrary to EPA policy to use the concentration at the quantitation limit for chemicals detected above the instrument detection limit, but below the practical quantitation limit ("PQL"). The PQL is "the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions."

National Primary Drinking Water Regulations, Synthetic Organic Chemicals, Monitoring For Unregulated Contaminates, 52 Fed. Reg. 25,690, 25,699 (1987) (final) ("D.W. Regs."). Data measured at or near the detection limit are more uncertain and have a higher percentage of false positives. Proposed Exposure Guide, 53 Fed. Reg. at 48,839.

The PQL is significantly higher than the instrument detection limit. However, EPA has refused to use data below the

PQL to set national criteria because of this lack of consistency in quality. D.W. Regs, 52 Fed. Reg. at 25,700. Assigning to all measurements below the PQL a concentration equal to the detection limit automatically elevates the average exposure concentration. Proposed Exposure Guide, 53 Fed. Reg. at 48,849. Again, the Fields Brook risk assessment demonstrates a bias towards overestimating the risk in the face of contrary data.

The impact of these unrealistic exposure assumptions is illustrated by comparing the PCB sediment cleanup concentration specified in the Order, 0.014 ppm,¹⁰ with the Food and Drug Administration's ("FDA") health-based action level for PCB concentrations in fish, 2 ppm. See 21 C.F.R. § 109.30. The FDA action level was promulgated after an exhaustive review of the toxicological literature and it applies to the fish commercially sold and consumed by 240 million Americans. See Polychlorinated Biphenyls (PCB's); Unavoidable Contaminants in Food and Food Packaging Materials; Reduction of Temporary Tolerances, 42 Fed. Reg. 17,487, 17492-93 (1977) (proposed) ("PCP Tolerances"). The FDA acknowledged that an epidemiological study of Michigan fisherman who ate an average of 24 to 25 pounds of fish per year containing an average of greater than two and a half times the FDA limit demonstrated "[n]o systematic adverse health effects in the exposed group when compared to the controls." Id. at 17,492-

10. See Table 3-1 of Sediment Operable Unit Engineering Design Investigation Statements of Work, Fields Brook, Ashtabula, Ohio (March 14, 1989).

17,493. Yet under EPA's proposed remedy the sediment from Fields Brook (which is much less likely to be eaten than fish) must be cleaned up to a concentration that is approximately 142 times more stringent than the FDA health-based action level for fish.

Another illustration of the impact of the unrealistic exposure assumptions is that EPA characterizes sediment containing between 2.9 ppm and 97.6 ppm of arsenic as presenting an unacceptable risk, yet EPA stated in the preamble to the 1985 NCP that:

off-site soil contaminated with arsenic may be cleaned up to a 100 parts per million (ppm) level, pending verification monitoring. The 100 ppm level has been determined by the Agency for Toxic Substance and Disease Registry (ATSDR) of the Center for Disease Control, Department of Health and Human Services to be a safe level based on direct ingestion of the contaminated soil by a child.

National Oil and Hazardous Substances Pollution Contingency Plan, 50 Fed. Reg. 47,912, 47,923 (1985)(final) ("1985 NCP").

In sum, the assumptions in EPA's risk assessment are scientifically invalid, contrary to common sense, and inconsistent with EPA's guidance. As a result, EPA has grossly overstated the risk posed by the sediment in Fields Brook. Yet even this grossly overstated risk calculation indicates that, except for a few chemicals in a few stream segments, the calculated risks are within EPA's range of acceptable risks.

B. The Risk Assessment For Fish Consumption

The theoretical risks attributable to eating fish from Fields Brook cited in the Order (risks allegedly "as high as 10^{-3} ") are also grossly overstated. This risk calculation was based upon a series of unjustified assumptions, including, but not limited to the following: (1) that a person eats 6.5 grams of fish a day from Fields Brook for 70 years; (2) that the concentration of chemicals in all of that fish is equal to the highest concentration of that chemical ever measured in a fish from Fields Brook; and (3) that all of the chemicals in the fish are from Fields Brook. FS at 2-5 to 2-7, 2-27 to 2-30 and Appendix A.¹¹

As an EPA internal reviewer noted, the assumption that local residents consume 6.5 grams of fish per day for 70 years from Fields Brook is "unrealistic" and appears to be totally unsupported in the record.¹² Additionally, the measured PCB concentrations in the fish fillets from fish caught in Fields Brook are 0.023 ppm to 3.1 ppm, with an average concentration of 1.2 ppm.¹³ According to EPA risk assessment policy, a realistic

11. Fish are migratory and the level of chemicals in the fish are a function of the concentrations of chemicals from all locations where the fish reside, not just Fields Brook.

12. See Memorandum from S. Ostrodka, Chief Technical Support Unit, EPA, to Allen Wojtas, Remedial Project Manager, EPA at 2 (July 31, 1986) ("Ostrodka Memo - Attachment 1").

13. See Table 2 from the Record of Decision - Summary of Remedial Alternative Selection (September 30, 1986) ("ROD"). Because of limitations of time, this letter will only discuss the
(continued...)

average value based on field data is preferred in such a risk assessment, particularly since it is totally unrealistic to assume that local residents will only eat the fish with the highest concentrations from a contaminated stream in the region. Exposure Guide, 51 Fed. Reg. at 34,049, 34,053.¹⁴

The average concentration of PCBs in the fish fillet tissue from Fields Brook and all but one of the individual measured concentrations are less than the 2 ppm FDA action level for PCB in fish and much lower than the level used in the Michigan epidemiological study. Compare Table 2 from the ROD 21 C.F.R. § 109.30 with PCB Tolerances, 42 Fed. Reg. at 17,493.¹⁵

C. Risk Assessment For Surface Water

The theoretical risk from surface water is similarly grossly overstated. The surface water risk assessment assumes:

- (1) that a child wades in the Detrex industrial drainage ditch that flows into Fields Brook 10 times a year for 14.5 years and the same person continues to wade in the Detrex industrial ditch 5 times a year for 52 years as an adult;

13. (...continued)
flaws with the risk assessment of ingestion of fish contaminated with PCBs. There are also significant and substantial flaws in the risk assessment of ingesting hexachlorobenzene or other chemicals present in the tissues of fish from Fields Brook.

14. "'Reliable, analytically determined values should be given precedence over estimated values.'" Exposure Guide, 51 Fed. Reg. at 34,053 (cite omitted).

15. The FDA standard was set objectively, in accordance to the requirements of the Administrative Procedures Act, as opposed to the ad hoc basis used at Fields Brook.

- (2) that the concentration of chemicals in the water is always the highest concentration ever detected;
- (3) that the source of the concentration of volatile chemicals in the surface water is the sediment, not direct permitted discharges;
- (4) that the chemicals in the water do not volatilize or degrade over time or distance;
- (5) that the concentration of organic chemicals which were reported as "detected but less than the quantitation limit" were present at a concentration equal to the quantitation limit, contrary to the actual result; and
- (6) that the site has potential for unrestricted future residential and/or commercial and industrial use. FS at 2-5 to 2-7, 2-21, 2-27, Appendix A and Appendix C.

Once again, each of these assumptions is arbitrary and capricious and contrary to the facts (as well as common sense). This exposure scenario demands that a person wade in an industrial drainage ditch 5 to 10 times a year for 66.5 years. Such an assumption simply is not credible.

In the aggregate, these assumptions distort the risk assessment process beyond the point permissible by law. Nonetheless, despite the absurd nature of all of these assumptions, the highest theoretical risk from this exposure route (1×10^{-4}) is within EPA's range of acceptable risks. This risk results from one chemical and the risks from all of the other chemicals are below 10^{-5} .

Furthermore, the underlying premise of this risk assessment is that the surface water concentrations result from

partitioning from the sediments to the water as opposed to direct discharges from point sources. However, the volatile chemicals that present the highest risk would not accumulate in the sediment. Rather, they are from the present direct discharges. This risk, such as it is, cannot be attributed to Cabot in any manner.

D. Conclusion

In sum, the existing evidence does not support EPA's finding that there is an "imminent and substantial endangerment" at this site. EPA's risk assessment is arbitrary and capricious and inconsistent with the NCP. Unfortunately, this risk assessment has probably caused more harm than the chemicals in Fields Brook by creating unwarranted anxiety and fear among local residents.

II. THE EVIDENCE OF RECORD DOES NOT SUPPORT THE REMEDIAL APPROACH ADOPTED BY EPA

A. EPA' Selection Of Excavation And Incineration Is Based Upon An Error of Law

The selected remedy at Fields Brook requires, inter alia, the incineration of sediment containing PCB concentrations of greater than 50 ppm. (ROD at 16). The selection of incineration was, in large measure, based on a series of erroneous legal conclusions.

1. EPA's Misinterpretation of the PCB Regulations

The ROD states that "PCB concentrations greater than 500 ppm must be incinerated in an incinerator that complies with 40 CFR 761.70" and if "PCB levels [in the sediment] are found to exceed 500 mg/kg [ppm], these sediments must be incinerated in a TSCA-type facility." (Id. at Table 9) (emphasis added). Furthermore, an EPA memorandum prepared five days prior to the signing of the ROD indicates that EPA personnel assumed that only incineration or landfilling were legally permissible at this Site.¹⁶

EPA determined that "the requirements of other Federal environmental and public health laws ... are not legally applicable to CERCLA response actions" when determining the appropriate extent of cleanup.¹⁷ The PCB regulations do not apply to PCB contaminants in place and do not require removal of each sediment.¹⁸ As a matter of policy, however, EPA determines whether such federal regulatory requirements are relevant and

16. Memorandum from R. Bartelt, Chief, Emergency and Remedial Response Branch, EPA Region V, to Basil G. Constantelos, Director, Waste Management Division, EPA Region V, Re: PCB Clean-up Levels For Fields Brook Sediment (September 25, 1986) ("Bartelt Memo" - Attachment 2).

17. National Oil and Hazardous Substances Pollution Contingency Plan, 50 Fed. Reg. 47,912, 47,917 (1985) (final) ("1985 NCP").

18. See the note prior to 40 C.F.R. § 761 and Part 761 - Polychlorinated Biphenyls (PCB's), 43 Fed. Reg. 7,150, 7,157 (1978).

appropriate. Therefore, PCB-contaminated sediments treated onsite need not comply with the TSCA regulations.

Even if the PCB regulations qualified as ARARs at this site (which seems remote at best),¹⁹ EPA's legal conclusions would be unsupported and contrary to the plain language of the PCB regulations. The PCB regulations state that

[a]ll dredged materials [such as sediment] shall be disposed of:

- (i) In an incinerator which complies with § 761.70;
- (ii) In a chemical waste landfill which complies with § 761.65; or
- (iii) Upon application, using a disposal method approved by the Agency's Regional Administrator in the EPA Region in which the PCBs are located....²⁰

Furthermore, EPA's statements are contrary to the purpose of the

19. The PCB regulations were designed to regulate the manufacture, production and disposal of PCBs, not the cleanup of hazardous waste sites. The issue in a Superfund cleanup is whether the remedy adequately protects public health.

20. EPA must determine that: (1) incineration or landfilling is not "reasonable and appropriate" based on "technical, environmental, and economic considerations"; and (2) the alternative disposal method is protective of human health. 40 C.F.R. § 761.60(a)(5). Also see 40 C.F.R. § 761.60(e) (allowing disposal of PCBs by a method that is the equivalent to incineration).

PCB regulations²¹ and EPA's longstanding and consistent interpretation of the PCB regulations.²²

The ROD also states incorrectly that

the U.S. EPA Interim Policy for Planning and Implementing CERCLA Offsite Response Actions ["Superfund Offsite Guidance"] ... states that whenever disposal of PCB's are undertaken they must be incinerated unless the concentrations are less than 50 ppm. . . . These guidelines for the disposal of PCB's are considered both relevant and appropriate for Fields Brook sediment. Therefore sediment containing PCB's greater than 50 mg/kg is proposed for thermal treatment. (ROD, Attachment B at 3 (Thermal Treatment Criteria)).

The assertion that Superfund Offsite Guidance²³ is an ARAR that requires incineration of sediment containing PCB concentrations greater than 50 ppm, or creates a new policy

21. EPA amended the PCB regulations from 1977 to 1979 specifically to permit the use of health protective, yet more cost-effective, disposal methods than incineration for PCB contaminated soils and sediments. Compare Polychlorinated Biphenyls (PCBs), Toxic Substances Control, 42 Fed. Reg. 26,564, 26,572 (1977); Part 761 - Polychlorinated Biphenyls (PCBs), 43 Fed. Reg. at 7,151-52, 7,158; and Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, And Use Prohibitions, 44 Fed. Reg. 31,514, 31,520 (1979).

22. See, e.g., EPA, Draft Guidance and Regulatory Background on the Determination of Response Actions At Superfund Sites With PCB Contamination at 8, attached to a memorandum from R. Wyer, Director, Hazardous Site Control Division, to M. Halper, Director, Exposure Evaluation Division (March 13, 1989).

23. Procedure For Planning and Implementing Off-Site Response Actions, 50 Fed. Reg. 45,933 (1985) ("Superfund Offsite Guidance"). On its face, the document is an interim policy, not a requirement, and is directed at offsite response actions, not onsite response actions, such as those being discussed in the Fields Brook ROD. Additionally, PCB policy can not be changed by a Superfund policy memorandum.

concerning the PCB regulations, is wrong on several grounds. First, the Superfund Offsite Guidance is guidance, not a duly promulgated regulation and, therefore, is not binding in this context.²⁴ A guidance cannot supercede a regulation.

Furthermore, a guidance cannot be considered an ARAR since it is not legally binding. At most, a guidance is something that may be considered by EPA in selecting a remedy.

Second, the Superfund Offsite Guidance does not make any recommendation that differs from the PCB regulations. The only mention of PCBs is in one paragraph that summarizes the existing PCB regulations.²⁵ This summary explicitly states that "the rule provides for certain exceptions that provide alternatives to the incineration requirements." Superfund Offsite Guidance, 50 Fed. Reg. at 45,936. The other provisions of the PCB regulations that permit other alternative disposal methods for PCB-contaminated material containing PCB concentrations greater than 50 ppm are not explicitly cited, but are explicitly contained in 40 C.F.R. § 761.60 (which is cited).

In short, the selection of incineration of sediment containing PCB concentrations greater than 50 ppm is based upon

24. The Seventh Circuit re-affirmed this point recently when it held that an EPA Region 5 policy statement had no legal effect. American Paper Institute, Inc. v. EPA, Civ. Act. No. 89-1751, 30 Env't Rep. Cas. (BNA) 1177, 1178 (August 18, 1989).

25. Superfund Offsite Guidance at 45,936-37. This guidance states that "[r]equirements for the disposal of PCBs are established in 40 C.F.R. § 761.60." Id. at 45,937.

an erroneous interpretation of law and, therefore, the remedial selection process is fatally flawed.

B. EPA's Failure to Assess Alternatives

A 106 Order is valid only if it is consistent with the statute and the NCP. The NCP requires EPA to evaluate a range of remedial alternatives. In choosing among alternatives, EPA must consider, inter alia, the following factors: (1) protection of the public health; (2) costs; (3) feasibility and reliability; and (4) the risks from implementing the remedy.²⁶

CERCLA does not require the consideration of an infinite number of remedial alternatives. However, some rational explanation must be provided for a decision not to consider reasonable alternatives. It is beyond the scope of this document to list every alternative that EPA should have considered. It is clear, however, the Fields Brook Feasibility Study did not adequately consider solidification, solvent extraction techniques, bioremediation and dechlorination.²⁷

26. 40 C.F.R. § 300.68(g).

27. See Research Triangle Inst., PCB (Polychlorinated Biphenyl) Sediment Decontamination - Technical/Economic Assessment of Selected Alternative Treatments (prepared for EPA, EPA/600/2-86/112, December 1986) (listing 11 treatment technologies that are more cost-effective than incineration of sediment); EPA, Technology Screening Guide for CERCLA Soils and Sludges Table 3 (EPA/540/2-88/004, Sept. 1988) (listing 11 treatment technologies that are demonstrated or potentially effective in treating PCBs); S. Hokanson, et al., Earth Technology Corp., Soil Treatment Technology Selection at Post-SARA Sites: Comparative Analysis of Five Case Studies (prepared for EPA under PEI Contract No. 68-03-3413) published in Superfund '88, Proceedings of the 9th (continued...)

EPA's limited review of alternatives is particularly egregious in light of EPA Region V's decision to allow PRPs at the Outboard Marine Superfund site to treat PCB-contaminated sediment through an alternative technology and then to landfill the remaining sediment.

Before implementing a remedy at this site, the agency should therefore reassess all options that appear to be cost-effective and protective of human health of the environment.

C. EPA's Failure to Consider The Risks Posed By Incineration

In its haste to justify a preselected remedy, EPA has also failed to consider the risks posed by that remedy. Neither the RI/FS nor the ROD evaluate the risk from excavation and incineration of contaminated sediment. This is a critical flaw because consideration of the risk during implementation of a remedial alternative is required by: (a) the 1985 NCP;²⁸ (b) the

27. (...continued)

Annual Conference 484 (Published the Hazardous Materials Central Research Institute, 1988) (documenting that: (1) other treatment alternatives have been selected at other Superfund sites containing PCB contaminated soil or sediment; (2) the Fields Brook incineration remedy is higher in total costs and unit costs than for the other Superfund sites containing PCBs; (3) there were a greater number of technologies evaluated at most of the other Superfund sites compared to Fields Brooks; and (4) there were other inconsistencies in remedy selection process between the Fields Brook Site and the other four sites).

28. 40 C.F. R. § 300.68 (1985).

proposed NCP;²⁹ (c) EPA guidance;³⁰ and (d) common sense (i.e., a remedy should not be required if the "cure" is worse than the disease).

In any event, it is essential to consider this potential risk because excavation and incineration of large volumes of soil or sediment: (a) has been rejected by EPA at other hazardous waste sites because of the risk, cost or other reasons;³¹ (b) has been rejected by courts;³² (c) has been

29. Proposed NCP at 51,505. EPA's preamble to the NCP notes that "excavation of a particularly toxic, volatile, or explosive waste to meet an ARAR could pose high, short-term risks" which would justify selecting a remedy that will not meet an applicable or relevant and appropriate requirement. Id. at 51,439.

30. Most of EPA guidance also requires these risks to be assessed. See EPA, Guidance on Feasibility Studies Under CERCLA (June 1985); Superfund Health Assessment Manual (ICF, Inc. May 22, 1985 draft) (draft was used prior to May 1984); Superfund Public Health Evaluation Manual, at 29 (October 1986); Guidance For Conducting Remedial Investigations and Feasibility Studies Under CERCLA (EPA/540/G-89/004, October 1988) (interim final); EPA, Volume II: Draft Technical Protocol and Procedures For Developing Baseline Air Emission Estimates (1988); and EPA, Volume III: Draft Estimate Air Emissions From Cleanup Activities Superfund Sites (1988).

31. See Response to Public Comments on Hyde Park proposed Stipulation concerning Requisite Remedial Technology (except Section 12.0) at 3-3 (filed March 28, 1986); United States v. Hooker Chem. & Plastics Corp., 641 F. Supp. 1303 (W.D.N.Y. 1986); Record of Decision, Pepper's Steel, FL (March 1986); Public Health Risk Assessment of The Tyson's Site Remediation Plan (June 8, 1987) included in Attachment D of the Partial Consent Decree in United States v. Tyson, et al., Civ. Act. No. 84-2663 (E.D. Pa., lodged with the Court on February 19, 1988, and approved by the Court June 21, 1988) (particularly Paragraph VIII(c)(2) at p. 32, limiting excavation); Record of Decision, Seymour Recycling Site, Seymour, Ind. (2d O.U.) at 26 (EPA/ROD/ROD5-87/050 September 1986) (finding vapor extraction superior because of lower risks, less complexity and lower costs); Record of Decision, Diamond Alkal, N.J. Site (1987) (continued...)

totally excluded as a potential remedy for leaking municipal landfills because of the risks and costs;³³ (d) was considered by the Office of Technology Assessment ("OTA"), an independent technical arm of Congress, to be "not effective for uncontainerized waste dispersed through a large area;"³⁴ and - (e) is used as an example in the preamble to the proposed NCP of when compliance with an ARAR might present greater risks than an

31. (...continued)

(because of risks and costs); Record of Decision, U.S. Aviox Site, Niles, Michigan at 22-24 (August 1988) (choosing soil flushing over excavation and incineration because of the potential increased risk of exposure to low levels of volatile organic chemicals, costs and other factors); and Industri-plex, Woburn, MA, Summary of Alternatives, at 94 (Sept. 30, 1986). This is only an illustrative list.

32. United States v. Vertac Chem. Corp., 588 F. Supp. 1294, 1297 (E.D. Ark. 1984) (containment in place presented less risks and was more cost-effective than excavation and redisposal in a RCRA permitted landfill); United States v. Hooker Chem. & Plastics Corp., 540 F. Supp. 1067, 1079 (W.D.N.Y. 1982) (approving the Hyde Park consent decree which provided for containment and gradual removal of the mobile contents of the landfill against a challenge from local citizens which sought excavation and incineration of all wastes in the landfill); United States v. Hooker Chem. & Plastics Corp., 607 F. Supp. 1052, 1067-70 (W.D.N.Y. 1985), (approving the "S" Area Landfill Consent Decree against a challenge from local citizen groups and the Province of Ontario which sought excavation and incineration of all wastes in the landfill) aff'd, 776 F.2d 410 (2d Cir. 1985); United States v. Hooker Chem. & Plastics Corp., 641 F. Supp. 1303 approving a Stipulation specifying additional containment remedies determined necessary as a result of implementing the Hyde Park consent decree even though some citizen groups still sought excavation and incineration).

33. Solid Waste Disposal Facility Criteria, 53 Fed. Reg. at 33,326.

34. OTA, Technologies and Management Strategies for Hazardous Waste Control 210 (1983).

alternative remedy, therefore requiring the selection of an alternative cleanup method.³⁵

These risks are more than theoretical, as evidenced by the recent suspension of excavation at a hazardous waste site because the measured vapor concentrations generated by excavation violated air quality standards.³⁶ These examples are cited not for the purpose of arguing that excavation will present a significant risk at the Fields Brook site, but simply to highlight the necessity of evaluating this risk before a remedy is finally selected or implemented.

D. EPA's Misunderstanding Of The NCP Concerning Incineration

At the Fields Brook site, EPA apparently began the decision-making process with a preference for excavation and incineration. This preference simply cannot be reconciled with the NCP.

The Fields Brook remedy was selected pursuant to the NCP that was promulgated in 1985 ("1985 NCP"). Remedies that contain the chemicals at a site, e.g., immobilization, capping or other methods of containing and treating chemicals: (a) are

35. Proposed NCP at 51,439 (citing the release of PCB-contaminated sediment during dredging).

36. See Consortium Forced To Abandon Cleanup Plan Due to Unexpectedly High Toxic Vapor Levels, 19 Env't Rep. (BNA) 1180 (Oct. 14, 1988); and Letter to Robert Bolger, President, NPC Services, Inc. (the company implementing the excavation and incineration remedy at the Petro Processors Superfund site) from Brian Pinkowski, EPA Region VI (Jan. 11, 1988) (requiring the cessation of excavation because of high vapor levels).

specifically mentioned in the 1985 NCP as a technology available to treat contaminated soils and sediments³⁷ and in the definition of remedy;³⁸ (b) are cited as the performance equivalent of incineration in a preamble to the proposed NCP;³⁹ (c) are cited by EPA's Superfund cleanup guidance as a reliable and effective method of significantly reducing the amount of chemicals at a site;⁴⁰ (d) have been used successfully at numerous sites;⁴¹ (e) had been selected by EPA at virtually all other Superfund sites prior to December 1984;⁴² and (f) satisfy the requirements of Superfund.⁴³ In fact, EPA interpreted CERCLA

37. 40 C.F.R. § 300.70(b)(iii)(C,D,E) (1985).

38. 40 C.F.R. § 300.68(a) (1985).

39. Proposed NCP at 51,439 (*i.e.*, solidification can achieve comparable reductions in mobility or toxicity comparable to incineration, and, therefore, it can be substituted for incineration even when incineration is an ARAR).

40. See EPA, Protecting the Environment At Superfund Sites through Chemistry (EPA/600/D-87/222 July 1987); EPA, Review of In-Place Treatment Techniques For Contaminated Surface Soils, Volume I, Technical Evaluation, (EPA-540/2-84-003b November 1984); EPA, Technology Screening Guide for Treatment of CERCLA Soils (EPA/540/2-88/004 September 1988).

41. For example, solidification was selected in at least seven out the 31 RODs issued in fiscal years 1986, 1987 and 1988 for NPL sites with PCB-contaminated soils and landfilling or capping was selected in another 11 RODs.

42. See Index of Approved Remedial Actions (as of 5/23/86) in ROD Annual Report FY '85 (June 1986). Only two other RODs out of the 123 RODs issued through fiscal year 1985 required excavation and incineration of soil or sediment.

43. CERCLA did not "prohibit containment as a means of dealing with inactive landfills . . . [The] words of the statute clearly indicate that a reliable program of confining chemicals to their
(continued...)

as: (a) preferring incineration over other alternatives only to the extent that incineration is more cost-effective than other alternatives; and (b) not having a technology-forcing effect.⁴⁴

In sum, the NCP did not give a preference to incineration alternatives as of September 1986. Rather, under the NCP, cost was to play an important role in the selection of Superfund remedies.⁴⁵

E. EPA's Misunderstanding of the NCP Concerning The Level of Risk That Is Acceptable

EPA deemed risk levels higher than 10^{-6} "unacceptable." ROD, Responsiveness Summary at 12. However, EPA regularly accepts risks higher than 10^{-6} . See Proposed NCP, 53 Fed. Reg. at 51,505; EPA, Record of Decision, Seymour, Ind. (2nd O.U.) (EPA/ROD/R05-87/050, September 1986) (accepting a groundwater cleanup level that corresponded to a 10^{-5} risk at the boundary of the facility).

Risks greater than 10^{-6} are accepted: (1) in EPA's definition of hazardous waste⁴⁶ and in the setting of

43. (...continued)
present location is sufficient to satisfy the requirements of the law." United States v. Hooker Chem. & Plastics Corp. ("S" Area Landfill), 607 F. Supp. at 1068-69 (W.D.N.Y. 1985).

44. 1985 NCP, 50 Fed. Reg. at 47,929 (1985).

45. National Oil and Hazardous Substance Pollution Contingency Plan, 47 Fed. Reg. 31,180, 31,185 (1982). EPA, Guidance On Feasibility Studies Under CERCLA at 2-23 (June 1985).

46. See 40 C.F.R. § 261.24.

groundwater cleanups standards pursuant to RCRA;⁴⁷ (2) in determining whether hazardous wastes can be injected below an underground source of drinking water ("USDW");⁴⁸ (3) in other federal regulatory decisions;⁴⁹ (5) by experts in the field;⁵⁰ and (7) by the courts.⁵¹

In sum, EPA's dismissal of a cleanup level that may present a residual risk greater than 10^{-6} is arbitrary and

47. 40 C.F.R. §§ 264.94(a)(2) and (3).

48. See Underground Injection Control ("UIC") Program: Hazardous Waste Disposal Injection Restrictions; Amendments to Technical Requirements for Class 1 Hazardous Waste Injection Wells; and Additional Monitoring Requirements Applicable to All Class 1 Wells, 53 Fed. Reg. 28,118, 28,122, 28,123 (1988) (final rule) (amending the UIC regulations to be consistent with the RCRA no migration standard).

49. Solid Waste Disposal Facility Criteria, 53 Fed. Reg. 33,314, 33,352, 33,368, 33,370-71, 33,378-79 (1988) (proposed rule); Rodricks, Wrenn & Brett, Determination of Significant Risk In the Regulation of Chemical Carcinogens, 1 Tox. L. Rep. (BNA) 1337 (April 29, 1987); Travis, Richter, Crouch, Wilson & Klema, Cancer Risk Management: A Review of 132 Federal Regulatory Decisions, 21 Env't Sci. Tech. 415, 419 (1987); Travis and Hattemer-Frey, Determining an Acceptable Level of Risk, 22 Env't. Sci. Tech. 873, 875 (1988).

50. Ricci and Cox, Acceptability of Chronic Health Risks, 1 Tox. L. Rep. (BNA) 986, 1,000 (Feb. 11, 1987); Milvy, EPA, A General Guideline For Management of Risk from Carcinogens, 6 Risk Analysis 69, 71 (1986).

51. See Gulf South Insulation v. United States Consumer Product Safety Commission, 701 F.2d 1137 (5th Cir. 1983) (holding that a 5×10^{-5} risk did not warrant action) and Kelley v. Chemcentral/Grand Rapids, No. 80-30139-CE (Mich. Cir. Ct., Kent May 3, 1984) (holding that the defendant could shut down all or a portion of a groundwater purge well system when the discharge of contaminated groundwater to a surface stream would result in surface⁵ water concentrations in the stream which would not exceed the 10^{-5} risk level for carcinogens).

capricious, inconsistent with the NCP and prior Superfund decisions and otherwise contrary to law.

F. EPA's Misunderstanding Of The Land Disposal Ban

One of the rationales used to support excavation and incineration of the sediment was that "the land disposal ban will be effective [when actual excavation occurs] and contaminated sediment at Fields Brook cannot be landfilled without treatment." ROD, Responsiveness Summary at 12.

The chemical concentrations in the sediment are not high enough to qualify for the land disposal ban. Furthermore, contrary to the statement in the site-specific Fields Brook ROD, EPA's interpretation in the preamble to the NCP is that the "land disposal restrictions are not applicable where banned waste ... is stabilized, or treated in situ." Proposed NCP, 53 Fed. Reg. at 51,444-45.

Again, EPA's stated legal rationale for selecting incineration is inconsistent with the NCP and contrary to law.

G. EPA's Lack Of Objectivity

The most troubling aspect of this proceeding is that, as one EPA official noted, the record was apparently created to "vindicate a fore-gone conclusion" rather than to provide an objective review and consideration of the most appropriate remedy according to the factors specified in Superfund and the NCP.⁵²

52. Ostrodka Memo (Attachment A) at 1.

Bias is a serious charge, but such a charge is unavoidable at this site. In view of the written statements by EPA personnel alleging a slant in the remedy selection process, the extreme and unrealistic nature of the exposure assessments, and the last minute search for interpretations of the PCB regulations that could be cited as requiring incineration, Cabot can only conclude that the decision-making process at this site was seriously flawed from the start.

Accordingly, EPA should vacate its Section 106 order. In addition, before implementing any remedy at this site, EPA should reassess its entire approach and should solicit comment from all interested parties.